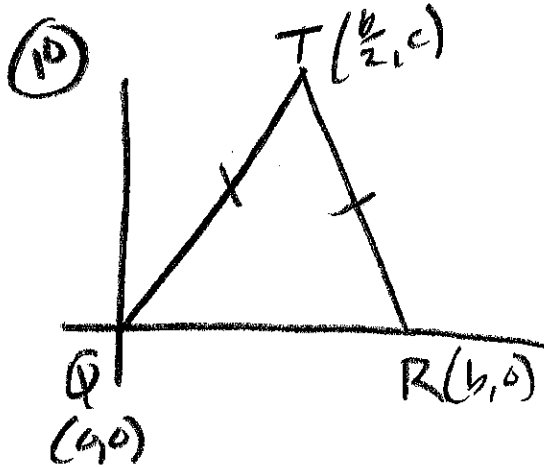
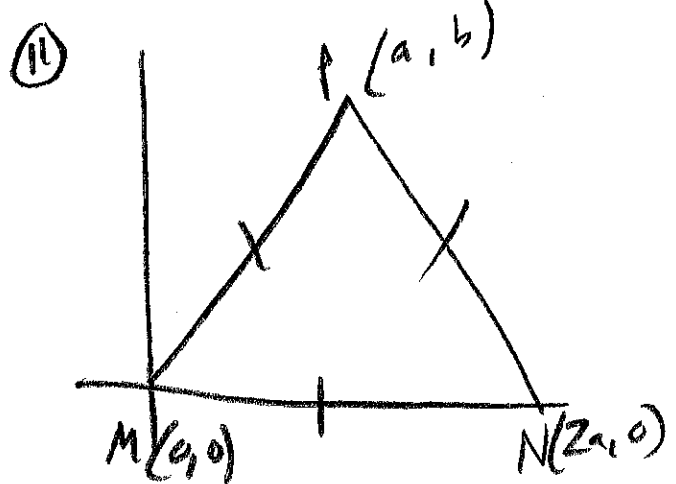


Key

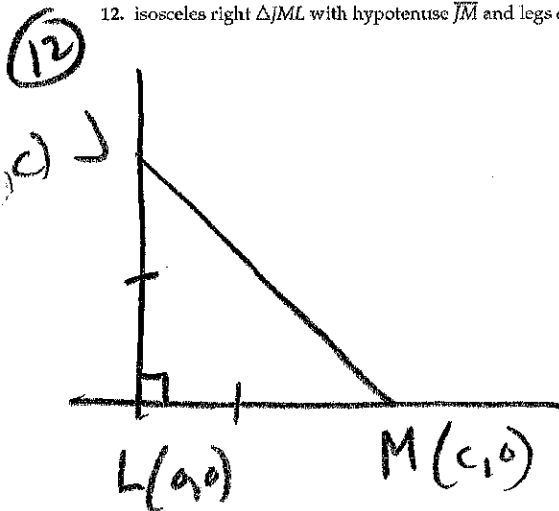
Position and label each triangle on the coordinate plane.
10. isosceles $\triangle QRT$ with base \overline{QR} that is b units long



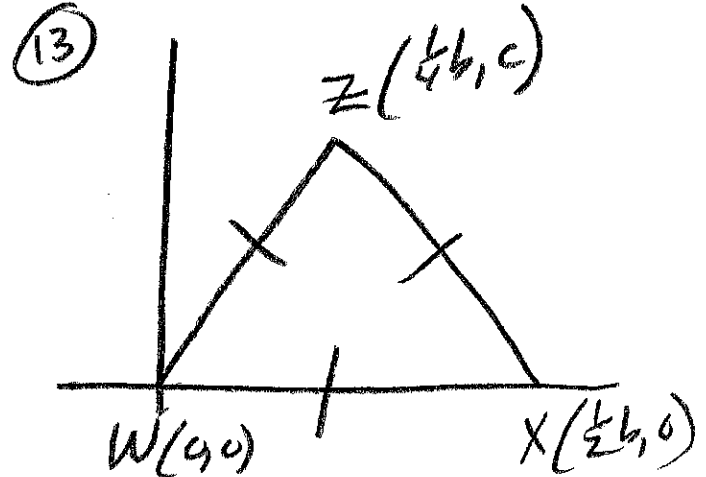
11. equilateral $\triangle MNP$ with sides $2a$ units long



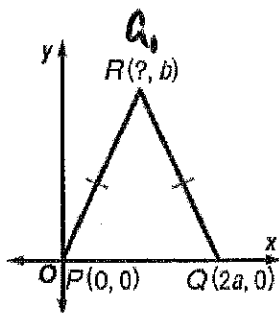
12. isosceles right $\triangle JML$ with hypotenuse \overline{JM} and legs c units long



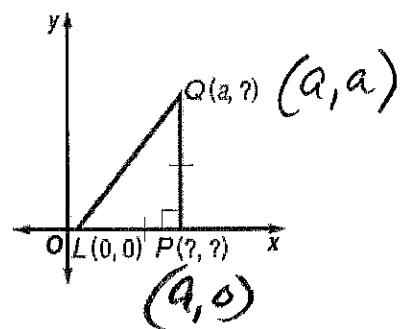
13. equilateral $\triangle WXZ$ with sides $\frac{1}{2}b$ units long

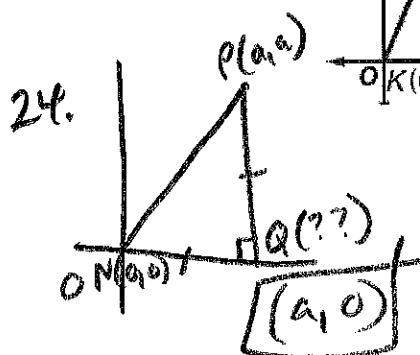
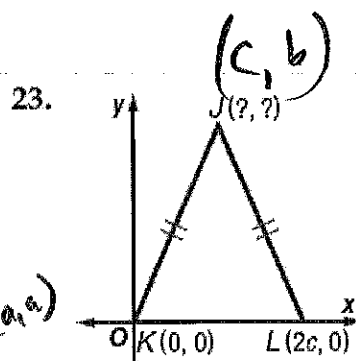
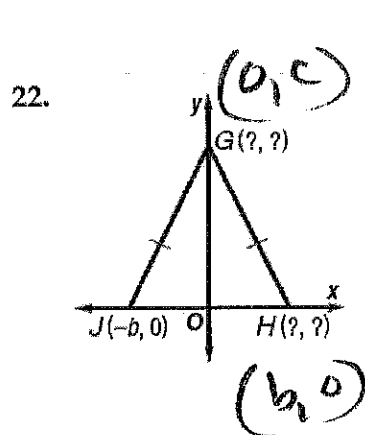
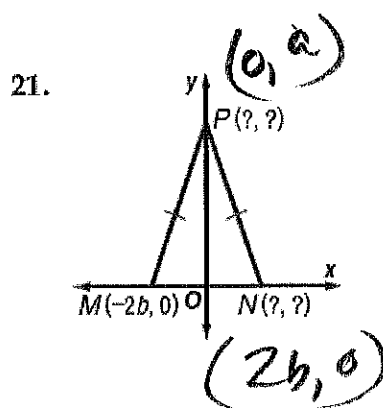
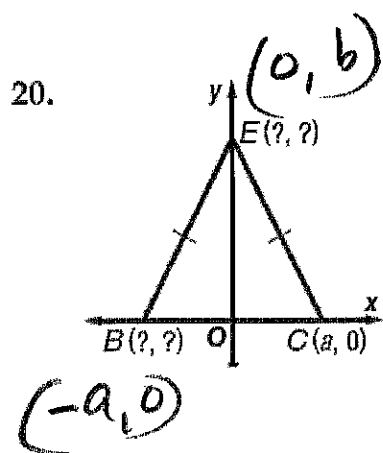
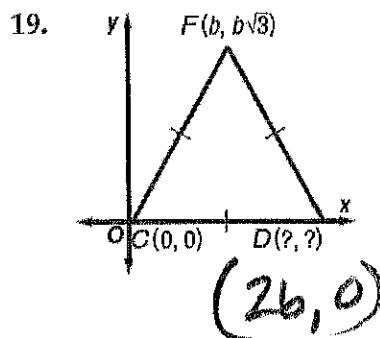
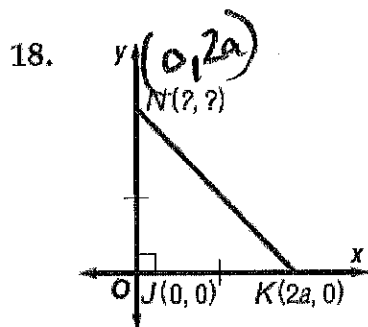


16.



17.





Name

Key

Date

4.7 Homework

Homework

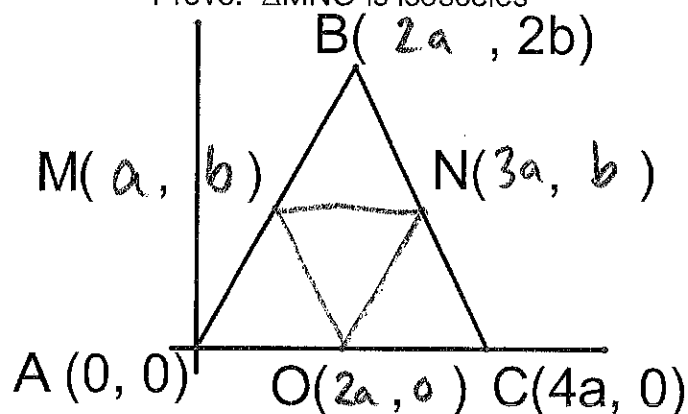
P 224-225

10-13, 16-24, 26-28(on paper below)

#26. The 3 segments joining the midpoints of the sides of an isosceles triangle form another isosceles triangle.

Given: Isosceles triangle ABC. (legs \overline{AB} with midpoint M, and \overline{CB} with midpoint N, base \overline{AC} with midpoint O)

Prove: $\triangle MNO$ is isosceles



$$MN = \sqrt{(3a-a)^2 + (b-b)^2} = \sqrt{(2a)^2}$$

$$MN = 2a$$

$$MO = \sqrt{(2a-a)^2 + (0-b)^2}$$

$$MO = \sqrt{a^2 + b^2}$$

$$NO = \sqrt{(3a-2a)^2 + (b-0)^2}$$

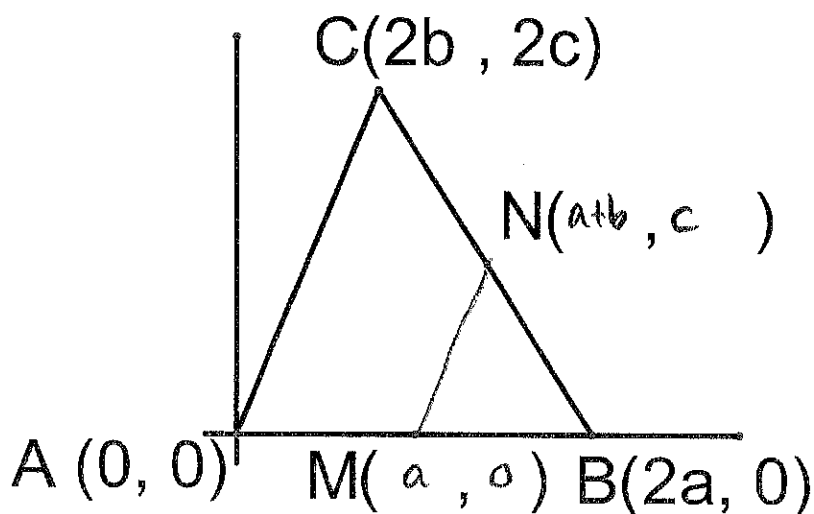
$$NO = \sqrt{a^2 + b^2}$$

$\triangle MNO$ is
isos. b/c
 $MO = NO$

#27. If a line segment joins the midpoints of 2 sides of a triangle, then it is parallel to the 3rd side.

Given: Triangle ABC. (With \overline{AB} with midpoint M and \overline{CB} with midpoint N)

Prove: $\overline{MN} \parallel \overline{AC}$



$$\overline{MN} \quad m = \frac{c-0}{a+b-a} = \frac{c}{b}$$

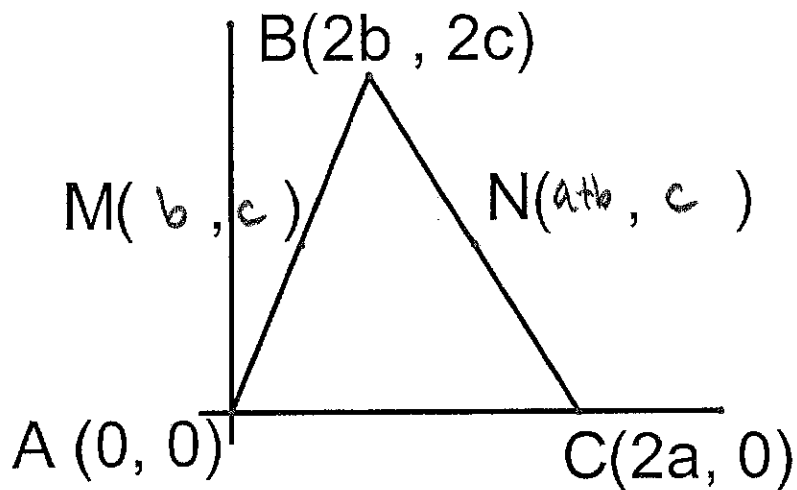
$$\overline{AC} \quad m = \frac{2c-0}{2b-0} = \frac{c}{b}$$

$\overline{MN} \parallel \overline{AC}$ b/c slopes
are same

#28. If a line segment joins the midpoints of 2 sides of a triangle, then its length is equal to $\frac{1}{2}$ the length of the third side.

Given: Triangle ABC. (With \overline{AB} with midpoint M and \overline{CB} with midpoint N)

Prove: $MN = \frac{1}{2} AC$



$$MN = \sqrt{(a+b-b)^2 + (c-c)^2}$$

$$MN = a$$

$$AC = \sqrt{(2a-0)^2 + (0-0)^2}$$

$$AC = 2a$$

$$MN = \frac{1}{2} AC$$

$$a = \frac{1}{2} 2a$$

$$a = a \checkmark$$